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CI 513B: Critical Thinking Tool

1. How does the Intel Seeing Reason Tool facilitate students’ critical thinking?

*This tool allows students to create a visual causal map. In it, they can organize their thinking and demonstrate cause-and-effect relationships. Through a research and/or writing process, this tool is helpful at all stages—at the beginning to plan, throughout the process to reflect, and at the final stages to report conclusions or findings. Furthermore, students can use this tool to express their thinking in a visual way, which facilitates the teachers’ observation and assessment of the students’ thinking process.*

1. Create a new factor, describe its relationship to traffic jams, and add it to the map. Explain what you did.

*In the demo tool, I viewed the sample project titled, “Try Seeing Reason.” This project demonstrated relationships related to traffic jams. I added one factor that leads to the number of accidents. In the project, the author visually demonstrated with a blue arrow between accidents and traffic jams that accidents* increase *the number of traffic jams. By adding a factor—cell phone usage—I created an additional factor, aside from rain and snow, that may increase the likelihood of accidents occurring. In short, I demonstrated visually that cell phone usage indirectly increases the incidence of traffic jams.*

1. What are the key steps a teacher must take to set up the Seeing Reason Tool and engage students in using the tool?

* *Developing a project: The teacher and his/her students must decide on a project and develop a brief but common definition and understanding of the project. This process creates a common frame of reference.*
* *Identifying initial factors: In groups (best to use pairs), students must use prior knowledge and experience to consider and decide upon the factors that relate to the project/issue. Each factor should be described. The teacher must help the students consider what is and is not a factor.*
* *Showing cause and effect: Students must create links between the factors they chose (e.g. bad weather) and the outcome (e.g. traffic jams). When identifying these links, they need to address the nature of the relationship (e.g. positive, negative) and describe how the factor influences the outcome.*
* *Refining understanding: After outlining the predicted relationships between factors and the outcome, students refine their understanding by collecting data to confirm or readdress the relationships they originally outlined.*
* *Drawing conclusions: Using the map, identifying relationships, and collecting data to support their theory help students develop important conclusions about the cause-and-effect relationships under investigation. Students should draw some important conclusions about which factors are more significant determinants of the outcome under study.*
* *Looking at the results: The teacher must evaluate the projects based on the evidence, soundness of the conclusions/recommendations, and the quality of the presentation. Maps are not assessed directly, only those products which evolve from the visual mapping tool.*

1. How do the examples stimulate your thinking of how to use the Seeing Reason Tool?

*The examples demonstrate to me how the Tool can be used for both teachers and students. I could look at how different lessons, assessments, technology tools, etc. can help students understand central themes. Similarly, the students can do the Tool activity to learn about a certain phenomenon. Being a social science teacher, this tool would be great for look at cause-and-effect relationships associated with social science phenomena.*

1. How does the Intel Showing Evidence Tool facilitate students’ critical thinking?

*The Tool facilitates students’ critical thinking by forcing them to detail the essential components of an argument. In doing so, the Tool is a scaffold to aid students in creating an argument and supporting it. Through the use of this Tool, students will be better equipped to think critically about what goes in to making and supporting any claim.*

1. Explain how each of the assessments provides guidance to students throughout the project.

*The assessment tool allows the teacher to peer in to each group’s progress of building evidence and supporting a claim. The teacher can type in his/her evaluation and give the students tips on how to best move forward with their work.*

1. What are the key steps a teacher must take to set up the Showing Evidence Tool and engage students in using the tool?

* *Developing a project: The teacher should first have students evaluate orally a scientific claim in a magazine or article, then transition into a discussion about what makes evidence good or bad (or even better, reliable). The students must then be put into teams and given a claim. The teacher will then set up the project online (providing a project title, description, question, version of evidence.*
* *Creating, clarifying, and rating evidence: The teacher must demonstrate how to create a new piece of evidence (which they will gather from a variety of sources) and evaluate the piece of evidence based on an agreed-upon rating scheme of one to five checks.*
* *Creating one or more claims: After gathering sufficient evidence, students will be asked to create a claim, which will be supported given the evidence they collected. They can all evaluate one claim or can produce their own claims from their evidence.*
* *Link evidence to a claim: The teacher shows students how to link a piece of evidence to a given claim. Evidence in the evidence bin is neutral, but it must become either positive or negative once it is moved over into the claims workspace. After the evidence is moved into the claims workspace, the evidence must be rated by the students.*
* *Evaluate the claim: The teacher differentiates the support rating versus the quality ratings. Through this process, the students learn how to rate the claim over all, given the evidence, with a range of stars, from one to five.*
* *Assessing the results: The teacher can log in to the Teacher Workspace throughout the process to review and comment on any given team’s work.*

1. How do the examples stimulate your thinking of how to use the Showing Evidence Tool?

*I am really motivated by the project examples to think of infusing more argumentation and discussion into my classes. Rather than hit just content objectives, this tool allows teachers to facilitate critical thinking and tangible speaking and writing skills. Developing, supporting, and evaluating a claim is an essential component to success in academic and professional life.*